

#### ABSTRACT

A method and apparatus for building a packet grooming and aggregation engine is disclosed. The grooming and aggregation engine can be applied to the network for providing flexible aggregation and service multiplexing functions. A method and apparatus achieves the intended function that is easy to implement and easy for the network operator to manage, yet provides enough flexibility to mix and match various services at the edge node of the network. One specific embodiment of the patent is an Ethernet over SONET mapping system where user traffic is aggregated and groomed into SONET transport virtual concatenation channels.